FISCHER'S MAGAZINE

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SHOW ME A MAN WHO MAKES NO MISTAKES AND I WILL SHOW YOU A MAN WHO DOESN'T DO THINGS.
— THEODORE ROOSEVELT

Fischer's Magazine

Devoted to the advancement of the Science of Electro-Physio-Therapy and to the interests of those earnest and enlightened medical men who are practicing it.

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Christmas

Let us take a little trip down Memory's Lane.

At the end of the lane, we are back in an old fashioned home. It is Christmas Eve, and all outdoors is covered with a soft, white mask of new fallen snow. We have been put to bed early, for we are only a few years old, and little folks must be out of the way when Santa comes. Under the warm blankets we shiver with excitement as we listen for the muffled patter of reindeer hoofs and the silvery jingle of sleighbells.

Presently, however, in the midst of our vigil, the Sandman has his way with us and we fall asleep. We are startled into a glad wakefulness by mother's voice—or father's—"Santa Claus has been here; come and see what he left for you!" We come, round eyed with expectancy.

What a vision! A corner of fairyland, transplanted into the familiar room. Candles gleam softly against the dusky green of a tall Christmas tree, their light reflected in twinkling splendor by brilliant, colored ornaments and glittering tinsel. On the boughs and all about the tree are things straight from Santa's workshops. With a thrill of purest joy, we set about inspecting these.

Never, in after life, may we experience an hour just like that one. The nearest approach to it, perhaps, lies in the reflected joy that is ours as we stand in the background at

Christmas time while today's generation of little folks takes the place that once was ours.

May that joy, and all the pleasant merriment of Holiday Time, be yours in full measure, this coming Christmas tide.

Electrotherapy in Chronic Prostatitis

An Open Letter From

L. B. WILLIAMS, M. D., TORONTO

"Gentlemen: In Fischer's Magazine, October Number, Page 16, 'Prostatitis,' both the enquiring and the responding doctor seem to be chafing under defeat. The former used Diathermy and 'failed to get results.' The other doctor in answering his confrere says 'where the patient does not respond satisfactorily.' Impaired prostate (chronic) is today, and unnecessarily so, one of the most serious conditions of man's maturer years. Electrotherapy and surgery in their respective schools of thought in medicine are the rostrum of therapy. The writer, who has experienced much of both, has no hesitancy in saying that in the earlier days of symptoms, Electrotherapy will remedy the patient to his satisfaction, with no thought of surgery. In the long neglected cases it will help much to make life less of a burden, whereas with surgery life is too far spent to give any assurance; it isn't a fifty-fifty chance of either living or betterment.

"In the light of what may be accomplished today with Electrotherapy, the blight of the contemplation of this 'late stage' lies on the doorstep of the medical profession.

"I think the trouble with the first doctor is that he 'put all his eggs in one basket.' He used only diathermy. Manufacturers are partly to blame for this. Their booklet literature, naturally, refers only to that which their outfit produces. The writer's treatment of chronic prostate trouble may be illustrated by a simple analogy. The farmer, to renew an old, red, hardened, muddy martingale of his harness, washes it off, puts it in an oven under a prolonged gentle heat, then soaks it with oil, and when he realizes that thorough penetration of the oil is effected, he begins to manipulate the strap, or otherwise a type of massage. These respective maneuvers have their sequence as well as their need. The chronic prostate patient experiences constitutional nervousness, sluggish abdomen, generally congested pelvic tissue, contracted unhealthy bladder, lethargic rectum, probably piles, pelvic motor nerve impairment, all apart from the individual indiosyncrasy.

"After the bowels are flushed, I first start the abdomen towards better tone with Diathermy followed by surging Sinusoidal. Rapid Sinusoidal treatment to lower spinal nerve plexuses. This type of treatment clears the prostatic environment of stasis, and is imperative. You must have favorable surroundings. Diathermy with metal mesh plate to whole perineum working against a bifurcated cord to plates, one over bladder and the other over sacral region; at times disconnect one bifurcated cord and again the other, which will regionally concentrate. This one change is only typical of many innovations for which your experience must be on the alert.

"Now for prostatic massage, the deep, prolonged, culminating surge, special applicator in rectum, absolutely against prostate; and I have apparatus for making sure of maintaining what I set. The current won't go through an old, petrified prostate if it can get easier media. Here is where haphazard procedure fails.

"The type of surge makes all the difference. I use here a type of machine that, in its pull, lacks polarity effect, because with some of my Sinusoidal wave outfits, before I could effect sufficient pull to suit me, the patient would be indicating a feeling of bowel evacuation necessity. The indifferent pad I place over the bladder to improve its condition indirectly. Occasionally I use an insulated flexible olive tipped electrode in the penis, operating just where you feel the insertion offers resistance, using the same surging current. Sometimes, with considerable urethral narrowing, I employ galvanism, positive pole if tenderness and tendency of slight manipulation to make a little showing of blood; or negative pole if I desire some softening. The surge I use is slow, starting from zero, gradually reaching its zenith of pull, which wringing effect is prolonged, for obvious reasons, before retiring. I use sponge disc electrode with surge throughout urethral tract posteriorly outside penis. Diathermy with a rectal electrode is used in prolonged treatments and not too heavy for its general metabolic effect.

"You have to deal with enlarged prostate, nerve force exhaustion, constricted urethra, atrophied irritable bladder, pelvic congestion and stasis; and in the wake of it all is general nervousness with its by-products. How far reaching are your results, of course, has many determining factors, but you will have very beneficial effects with which, under the circumstances, both doctor and patient will be pleased; so much so that the first doctor will not enquire about his failure nor the second doctor acknowledge, 'Yea—even so.'"

A Brief Outline of the

Course in Physiotherapy

For Physicians' Office Assistants

Thorough training in the use of Physiotherapeutic apparatus, which will provide skilled assistants for physicians, is assured through this comprehensive course.

The course will be highly intensive, and covers Physical Therapeutics thoroughly, including all branches of electrotherapy and massage. Three weeks constant attendance is required. Each day is divided into six one-hour periods, starting at 9.00 A. M. and ending at 5.00 P. M., with a two-hour luncheon recess. The work for each period has been very carefully and completely outlined, to the end that every minute shall count and no time be wasted in aimless discussion. A trained nurse, familiar with Physiotherapeutic apparatus and experienced in teaching, has charge of the work.

Following is a brief outline of the subjects covered in the course:

Outline

1. *General Office Procedure*—Including specific consideration of general nursing practice in connection with Physiotherapy. Also care of equipment.

2. *Anatomy*—Will be reviewed briefly in connection with the instruction in massage.
3. *Massage*—Swedish method for massage of body will be given, including active and passive exercises.
4. *High Frequency Currents*—Will be considered as to their source and application, as well as the proper manipulation of the machine. Actual practice in applying electrodes and administering the treatments will be included, giving Medical Diathermy according to the various technics; also Auto-Condensation and Vacuum and Non-Vacuum Tube applications.
5. *The Galvanic, Sinusoidal and Interrupted Galvanic Currents*—Will be considered as to sources, types of currents, machines for obtaining currents, manipulation of machines and application of electrodes. Particular attention will be given to the Morse Treatment for Intestinal Stasis.
6. *Phototherapy*—Including both the Heat Rays and Actinic Rays, will be considered both as to technic of application and as to physiological effects.
7. *Inspection Trips*—Through the Fischer factory, to see and understand the interior construction of equipment, and to various clinics in the city, will be made from time to time.

Reciprocal Registry System

Under our *Reciprocal-Registry* system, doctors may enter their applications for Fischer-trained nurses, and nurses may register for positions where such training is required. A nominal charge is made for the course, covering both training and laboratory fee.

First classes started November 24, and extend through until December 13. The second series will begin at 9.00 A. M. January 5 and close on January 24. Prompt registration for this second series is urged, as reservations undoubtedly will be exhausted early.

Doctors and nurses desiring further information are requested to communicate with Mr. H. T. Fischer, either by letter or by telephoning Armitage 0322.

Diathermia and the Physiological Treatment of Cancer

By ALBERT C. GEYSER, M. D.
New York City

In a paper read before the ninth annual convention of the American Association for Medico-Physical Research, and printed in the Journal of that Association, Dr. Geyser discussed at some length the nature and causes of cancer. Of special interest to our readers are the following excerpts from this article which deal with the use of diathermia. We quote verbatim:

Some of the Research Findings

In the third report of the Imperial Cancer Committee (1908) Haalan, at the suggestion of Ehrlich, undertook some tests with heat upon cancer tissue intended for inoculation. The result was that when such tissue was heated for thirty minutes to 111.2 F., the tissue was no longer viable when transplanted. . . . . Jenson repeated the experiment and, in the annual report of the New York Cancer Laboratory, 1910, shows that all cancer cells die when heated to 116.6 F. for thirty minutes; Leob found that sarcoma cells died when exposed to a temperature of 113° F. for thirty minutes; Vedal showed that nearly all tumor growth was arrested with a continuous temperature of 104° F.; Lambert, in 1912, pointed out the relationship that exists between the degree of heat and the time of action on malignant as well as on normal cells. . . . .

Heat Electrically Applied

Electric coagulation, cathophoric sterilization, fulguration and cauterization are methods wherein heat is used to a degree of complete destruction of malignant cells in situ. I shall omit the description of these because they are in reality akin to surgery; they attempt to kill, destroy and remove the offending cells from the system in toto.

Physiological therapy does not consider the histological nor the anatomical formation or location of malignant growths; it endeavors to deal *only and entirely with the physiology* of such cells.

It has clearly been shown that heat of a certain degree destroyed tumor cells, yet in no way affected normal tissue. It is also a well known fact that dry or moist heat applied to the living body can only penetrate three to five millimeters. All of the good effects observed from the application of moist or dry heat is due to the gradual heating of the entire blood volume and to the reflex effects of local heating.

In the diathermic phase of a high frequency current we have an agent that heats the tissues *through and through* without practically exerting any influence upon the outside. A malignant growth is of a much firmer, harder consistency and with a lessened circulation than normal tissue; it is therefore especially adapted to the *storing* and *retaining* of heat, when this is artificially supplied. In fact the malignant mass is *always* of a higher temperature *after applying diathermia* than the surrounding normal tissue. Under these circumstances it is easy to maintain a tissue or an organ in a state of elevated temperature for hours.

From practical experience it has been shown that when the entire malignant growth has been subjected to an increase of *three degrees* of temperature for sixty minutes daily its *physiology* is markedly interfered with. Cachexia is prevented or removed; the tumor mass undergoes a retrograde metamorphosis, individual nodules soften and they become smaller and finally disappear; pain ceases entirely; discharges lessen and lose their offensive odor. . . . .

Technic of Diathermia

Reference has been previously made to the thermic effects upon cancer cells. In all of those tests the cells had been *removed* from the patient for the purpose of transplantation. It was then shown that these cells, after the application of certain degrees of heat to them were no longer viable; therefore did not produce cancer upon the experimental animal. It is not our desire to remove cells and then destroy them. We intend to *leave the cells in situ,* but by the application of an electric current cause them to become heated to exactly the *same degree* of temperature as the experimented cells. It is not our object to interfere with their anatomy, but we *do want to change their physiology*. To do this it is necessary to include the entire tumor between the two electrodes of a high-frequency current. With breast or superficially situated skin cancers this is quite simple. With intra-uterine and rectal cancers, while a little more complicated and uncertain, nevertheless practical results may be achieved in eighty per cent of the cases.

In the case of breast cancers, a suitable electrode is applied directly over the lesion, the other electrode containing *at least* four times the surface area, is placed directly opposite upon the dorsum of the patient. The current is turned on to the point of tolerance, which is usually about fifty milliamperes to each square inch of the anterior electrode. If the skin overlying the growth is as yet intact, the reading may go as high as one hundred milliamperes to the square inch. From forty-five to sixty minutes should be consumed for each treatment, repeated daily or at least on alternate days.

When the growth is situated in the cervix uteri, or rectum, a suitably shaped electrode is placed in position, then a larger anterior and posterior electrode are placed on the skin of the abdomen and back of the patient, these two large electrodes are short circuited and led to one binding post of the high-frequency machine. The intra-uterine as well as the rectal cavity will bear temperatures considerably higher than the external skin. It is not uncommon to use 200-300 or even 1,000 milliamperes to the square inch of area in these mucus membrane applications. The treatments should be given daily or at least on alternate days for at least two months, then once per week for an indefinite period.

Let it be thoroughly understood that the application of diathermia *does not necessarily* remove the growth but it *does interfere* with the physiology of the cancer cells in such a manner that the previously present cachexia disappears, there is a complete cessation of pain, all lymphatic enlargements subside, the patient gains weight and appears to all intents and purposes normal.

After Diathermia has been used for a sufficient length of time, and these constitutional changes have been brought about, there is no reason why the growth should not be removed surgically or otherwise, because practically all chances of recurrence have been forestalled. The growth which was previously malignant, may now be looked upon as a benign tumor and dealt with accordingly.

Use of the Cervical Thermophore

The following information, contained in a letter written by Budd C. Corbus, M. D., of Chicago, in answer to a query from Dr. E. L. Hergert of Brooklyn, N. Y., may well prove of value to many or our readers.

"Concerning the Cervical Thermophore, it is anchored to the set screw of the bivalve speculum, either by a piece of wire or string. There is no danger of short circuiting if the electrode is firmly fixed within the cervix. If one has a ring stand holder or any such device, it can be substituted for the method described.

"Answering your queries: (1)—The Leucorrhoeal discharges that remain after thermophore treatment are best treated with topical applications of Mercurochrome or a continuation of Hot Vaginal Sitz Baths with the vaginal speculum.

"(2)—Non-Gonorrhoeal Endocervicitis is always greatly improved with Diathermy but barring laceration from childbirth is always systemic in origin and calls for systemic treatment. Always put the whole tip of the thermophore into the cervix or you will have a short circuit.

"(4)—The black cap that comes with the instrument is used when the thermophore is introduced in the male. The long rubber cap is substituted for the short one, then you have the long electrode for the male urethra. The reasons for the thread are obvious. If the cervix is too small and it is impossible to introduce the thermophore it would be better to use some other treatment. Do not mutiliate your patient to use the thermophore.

The
Waggoner Physiotherapeutic Lecture Courses and Clinics

By Mel R. Waggoner, M. D., Cedar Rapids, Iowa

Widespread and rapidly growing interest in these classes and clinics is indicated by the increased attendance that has marked the assembly of each succeeding class. Doctors who are keeping pace with the development of physiotherapy find them a valuable source of new information and up-to-date practices.

Classes for the Coming Season Follow:

Detroit, Michigan (Wolverine Hotel)	**December 15th to 20th**
***Cleveland, Ohio** (Hotel Winton)	**January 5th to 10th**
Los Angeles, California (Lecture Hall, Professional Building)	**January 26th to 31st**
San Diego, California (Grant Hotel)	**February 2nd to 4th**
San Francisco, California (St. Francis Hotel)	**February 9th to 14th**
Seattle, Washington (Olympic Hotel)	**February 16th to 21st**

*NOTE: In response to many requests, the Cleveland class, which had been canceled, has been reinstated as indicated above.

Personally conducted Courses, Clinics, Lectures

For Details, Fee, etc., etc., write the
Secretary of the Waggoner Lecture Courses, at
1664 N. Claremont Ave., Chicago, Illinois.
(Watch for announcements in Fischer's Magazine)

Diathermy in Urology

WALTHER, H. W. E., M. D., and PEACOCK, C. L., M. D.
(New Orleans)

Medical diathermy is subdivided into *sedative* and *stimulative.* Sedative diathermy produces an active hyperemia, stimulates phagocytosis and revitalizes tissue cells.

The authors report on 73 urologic cases treated by diathermy, either medical or surgical, during the year ending June 1, 1924. There were 11 cases of bladder tumors, 15 lesions of the external genitals (including chancroid, granuloma and warts), 3 cases of gonococcal endocervicitis, 25 cases of gonococcal epididymitis, 1 case of orchitis complicating mumps and 3 cases of gonococcal arthritis.

Negative results in prostate gland cases are attributed to the fact that a portable unit only has been used in this work, which does not deliver sufficient voltage to carry through the dense prostate structures.

Authors think that for treating primary papilloma of the bladder, surgical diathermy has no equal. It offers as much relief to malignant conditions in this viscus as any other one agent. In the latter cases, by means of the open operation, growths can be thoroughly cooked out with surgical diathermy.

Of the 11 bladder tumors treated 4 were so far advanced that cystotomy, surgical diathermy and radium were used principally to check hemorrhage and pain. The other 7 cases responded promptly to diathermy, but they must be kept under surveillance for some years.

Tumors of the urethra in the male can be treated as expeditiously with surgical diathermy (i.e., electro-coagulation) through the McCarthy Cysto-urethroscope as can tumors of the bladder through a cystoscope. Diathermy has been found superior to any other means of destroying urethral papilloma in women.

In the 15 lesions of the external genitals, the authors feel convinced that the procedure materially shortened the time of convalescence; and particularly recommend it on account of its cleanliness. Diathermy is specific for chancroid.

Although only 3 cases of endocervicitis were treated, the results have been very encouraging. They have used Corbus and O'Connor's thermophore, but varied the technic to the extent of alternating the indifferent electrode between the supapubic region and the back, so as to treat effectively both anterior and posterior cervical lips.

Sedative diathermy is the most satisfactory of all methods devised for the treatment of epididymitis. One treatment suffices in the majority of cases.

Points in the technic of this are: insulated table on which patient lies; *no air space* between electrode and skin; scrotum supported by insulated shelf; piece of mesh used for active electrode large enough to cover affected organ; patient keeps perfectly still; current starts at 50 milliamperes for one minute and is gradually increased to 1500 milliamperes, the increase being about 50 every 30 seconds.

Most patients will only tolerate up to 750 milliamperes. When the limit is reached it is kept up steady for about 20 minutes.

The results in the 3 cases of gonococcal arthritis were sufficiently striking to warrant their inclusion in this report.

Convention of P. C. P. A. Is a Big Success

The Third Annual Convention of the Pacific Coast Physiotherapy Association, held at the Professional Building in Los Angeles the last week in November, was a highly successful one, according to reports from the west coast city.

Attendance broke all records, and the earnestness and enthusiasm displayed at every meeting was a splendid index of the progress that Physiotherapy has achieved in that section. As one doctor has phrased it, "We are on the right road, and a long way along that road, toward full knowledge and full use of *all* the electrical modalities that are at our disposal today."

Officers and members of the P. C. P. A. are to be congratulated, not only upon the success of their Convention but upon their progress and success as Physiotherapists.

Program for Our

Monthly Physiotherapeutic Meeting

Monday, January 12th, and Tuesday, January 13th, 1925

MILES J. BREUER, M. D., Lincoln, Nebraska.
"Physiotherapy in Internal Medicine" - - 10:00 to 11:00 A. M.

HARRY M. THOMETZ, M. D., Chicago, Illinois.
Tonsil Clinic - - - - - - - - - - - 11:00 to 12:15 M.

L. C. SAMMONS, M. D., Shelbyville, Indiana.
"Physiotherapy in General Practice" - - - 1:30 to 2:30 P. M.

ERNEST CADWELL, M. D., Chicago, Illinois
"The Business Side of a General Practitioner's Life
and Physiotherapy as an Aid" - - - - - 3:30 to 4:30 P. M.

How to Get Here:

DRIVING—Follow Washington Blvd. west to Oakley Blvd., north on Oakley to Wabansia Ave., and one block west, or

BY ELEVATED — Take the Humboldt Park "L" to Western Avenue Station, walk one block north to Wabansia Avenue and a short block east to Claremont, or

BY SURFACE CAR—Western Avenue to Wabansia Avenue, and one block east to Claremont.

Doctor Breuer has kindly consented to remain over for an extra day and will be in our Lecture Room all day Tuesday, January 13th, to conduct clinics and to endeavor to assist you in solving the many and diverse problems which are constantly coming up in this particular line of medical work.

We look forward to two big instructive days and urge those who find it possible to attend to spend as much time with us as they can spare.

NO CHARGE—NO OBLIGATION

H. G. FISCHER & CO., Inc., Phone Armitage 0323
2335 Wabansia Avenue, Chicago

SPECIAL CLINICAL COURSE IN X-RAY and PHYSIO-THERAPY

Monday, January 5th, 1925—Omaha, Neb.

The fifth of a series of ten clinical courses sponsored by the Magnuson X-ray Co. for the purpose of further educating their customers in the uses of these modern therapeutic agents. These meetings are conducted by physicians of the highest standing who have had many years' experience in this work and they deal with the practical side of the question.

PROGRAM

9:00 to 12:00 a. m.—Practical Clinic at Lord Lister Hospital.

2:00 to 5:00 p. m.—Lectures and discussions by:
Leo C. Donnelly, M. D., Detroit, Mich.
Miles J. Breuer, M. D., Lincoln, Neb.
Dean W. Harman, M. D., Ames, Ia.
R. W. Fouts, M. D., Omaha, Neb.
A. L. Yocom, Jr., M. D., Chariton, Ia.
E. B. Kessler, M. D., St. Joseph, Mo.

The remainder of the week will be devoted to clinical work and instructions in practical technic, in charge of Dr. Donnelly and others.

You are invited to bring any interesting clinical cases to Lord Lister Hospital—any of them operated during the clinic will be hospitalized without charge.

NO FEE IS CHARGED FOR THIS COURSE

Is Diathermy Useful in Glaucoma? —In Epilepsy?

DR. CHAPMAN SAYS NO—AND YES

In response to an inquiry as to the value of diathermy in treatment of glaucoma and epilepsy, respectively, Dr. W. B. Chapman of Carthage, Mo., writes as follows:

"Regarding the question 'Is Diathermy Useful in Glaucoma?' It is not. Glaucoma is a mechanical condition. It is caused by a blocking back of the lymph inside the eye-ball and is marked by high intra-ocular tension. In fact, the diagnosis is made by a feeling of hardness of the eye-ball. Diathermy or any form of heat will increase the tension and aggravate the condition.

"As to the use of electrical modalities in epilepsy, I will say that they are beneficial in the majority of instances; however, if the convulsions are caused by some hereditary condition or are the result of meningitis or some similar condition, little can be done for the patient. I have recently had a couple of patients who were markedly benefited by the use of the Morse Wave Generator and galvanism. Both of these patients were afflicted with colonic stasis and were absorbing a great deal of poison from the lethargic colon. Huge doses of mineral oil and the Morse Wave Generator have straightened both of them out."

New Book on Diathermy in Genito-Urinary Diseases

"Diathermy in the Treatment of Genito-Urinary Diseases, with Especial Reference to Carcinoma," by Budd C. Corbus, M.D., F.A.C.S., and Vincent J. O'Conor, S.B., M.D., is the latest contribution to the literature of Physiotherapy—and a most valuable one.

This book has been written for the express purpose of familiarizing both specialist and general practitioner with the tremendous value of diathermy in the treatment of genito-urinary diseases in both sexes. The medical and surgical methods of its application to these diseases are given in detail.

The compilation of the volume represents more than five years of closely applied study of these methods. Both experimental and clinical results are given in detail.

A complete review of the study of various forms of heat in the treatment of cancer is given, followed by the technique for treating cancer of the penis, bladder, prostate and female urethra.

There are thirty-one original illustrations in black and white and halftone. Every procedure is graphically described.

Copies of this book may be had upon application to H. G. Fischer & Co., 2335 Wabansia Avenue, Chicago. Price, $5.00.

Thank You, Doctor!

Congratulatory messages from those who attended the Convention at Logan Square Masonic Temple in October have poured in during the past month in gratifying volume.

The majority of these kindly letters embody specific praise of some feature or features of the Convention. Many of them indicate a firm resolve to attend the next annual Physiotherapeutic Convention. Some embody constructive criticism which is heartily appreciated, and which will be valuable in the preparation of future programs. The tenor of all is, "keep up the good work."

As your communications have come in, we have answered them individually. But we want to take this opportunity to say publicly, and very sincerely, "Thank you, Doctor!"

You have given us an added incentive to make the next Convention even bigger and better.

Radiologists and Physiotherapists Meet

Interesting Program at Third Annual Session

The third annual meeting of the American College of Radiology and Physiotherapy was held at the Hotel Sherman, Chicago, November 12 to 14. During these three days, a great deal of ground was covered in lectures and discussions, and doctors who attended expressed themselves as being well satisfied that the time thus used was indeed well spent.

An intensive program, utilizing every hour of the available time, and including addresses by many well known authorities, covered the general field of Radiology and Physiotherapy. An interesting evening session included the annual banquet and the conferring of fellowship degrees.

These annual meetings provide an excellent forum for the discussion of everyday problems and new methods, and there can be no question but that their effects for good are far-reaching indeed. This magazine extends its congratulations, both to those who attended the meeting and to the management.

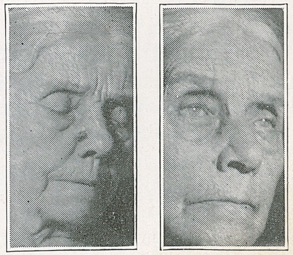
The Treatment of Malignancies by the Use of Surgical Diathermy and X-Ray*

A. L. YOCOM, JR., M. D.
Chariton, Iowa

The treatment of cancer whether it be medical, surgical, X-ray, radium or electrocoagulation has not reached perfection in all types and in all stages of the disease. The physician who can use any or all of the above mentioned methods when properly indicated is the one who is best fitted at the present time to fight the battle of the suffering cancer patient.

Ever since radiation was first recognized for the treatment of cancer the surgeon has referred to the radiologist the worst wrecks wrought by this dreaded condition. For years this effort on the part of the radiologists to check the ravages of the inoperable case has assisted in keeping in the background the real value of this mode of treatment. Nevertheless something had to be done for the suffering patient, and the radiotherapist, even though failure seemed the rule, continued to make improvement in technique and so, with the aid of the manufacturers of apparatus and physicists there has been a great advance in the treatment of malignancies. As a result, radiology has made more advance than any branch of medicine during the last twenty years.

When an inoperable case appears before us, the patient beyond the aid of any treatment, it makes us realize that there was a time in the beginning of this dreaded disease when satisfactory treatment would have prevented his present terrible condition, hence, we feel that the general practitioner and particularly the patient himself, carries a greater responsibility in directing the right treatment to cure these conditions.



Epithelioma near the ala of nose before and after treatment by surgical diathermy.

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*Read at a meeting of the Iowa Radiological and Physiotherapy Society, Des Moines, Ia., Feb. 28, 1924.

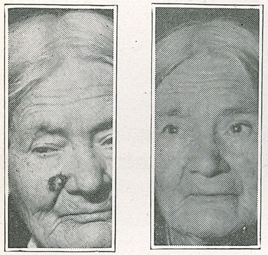
The fact that the surgeon and the radiologist has each continued to give treatment to the apparently hopeless case, while being stimulative to greater advancement, has nevertheless, driven from us many early cases that could have been cured, but the patients drifted hopelessly along waiting until too late or finding their way into the hands of the incompetent aid. Too often the average physician will pass up the small beginning lesion, which is readily removable, with a remark to the patient which leads him to think it is of no importance and can be ignored with perfect safety. The patient also is responsible many times for delay and thinks he will not bother the small growth until it begins to bother him.

Electrocoagulation and Surgical Diathermy

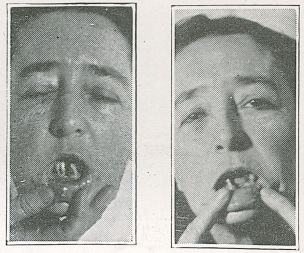
Electrocoagulation is the coagulation of diseased tissues by the Oudin current or one pole of the D'Arsonval current and is to be used for small superficial lesions.

Surgical diathermy is the application of high frequency currents for the destruction of tissues by the heat produced through the resistance offered by the tissue through which the current is forced, without sparking. The treatment differs from the application of the electrocautery or other applications of heat in that the heat with the latter methods is applied from without and does not have much penetrative power. The heat is generated in the tissues themselves and the temperature of the diseased area may be readily raised to a point of coagulation. Therefore it is the penetrating power of this heat which is more beneficial than the thermic cautery, which destroys only by transmitted heat.

Surgical diathermy is produced by the bipolar method of the D'Arsonval current, and should be of low voltage, high amperage and extremely high frequency. The indifferent electrode is a piece of block tin about eight inches in diameter and is strapped to the patient's back or shoulders. This electrode may be wet with a soap lather or used dry. The main object is good contact, and strapping with a good canvas binder is all that is needed. The active electrode is smaller and either made up of a point or some other suitable electrode as to the shape and size needed.



At left, Epithelioma near ala of nose before and after treatment by surgical diathermy. At right, Sarcoma of lower central region before and after treatment by surgical diathermy.



In surgical diathermy or electrocoagulation it is necessary to use an anesthetic of some kind. For the superficial lesions which are not too large, a local anesthetic such as novocain or some other similar preparation is used. For the larger lesions we use hyoscine and morphine and find H. M. C. satisfactory. The one-fourth morphine size is given about 40 to 60 minutes before starting, and the one-half size or another full dose is given upon starting, with sufficient chloroform to produce necrosis. Ether is not satisfactory on account of the danger of explosion, especially when working about the face.

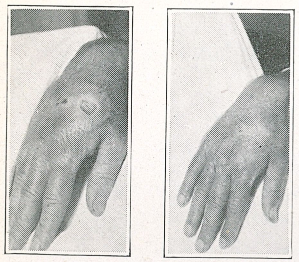
There is very little post-operative shock to surgical diathermy and on this account it is especially valuable in the aged. My oldest patient was 94 years of age and had practically all the lower lip removed and part of the upper without any shock and remained in bed only over night. There is a wonderful alleviation of pain. This is almost immediate after recovering from the anesthetic.

The local application of sufficient heat to the tumor mass destroys the growth. The use of a lower degree of heat to the periphery of the tumor and beyond its limits results in the inhibition of the growth of migrating cells. The dissemination of these cells throughout the organism is further prevented by the occlusion of the lymph spaces and channels, and further by the formation of scar tissue which forms a most desirable barrier against the new growth. By diathermy the deep penetration of the high degree of heat destroys, or at least inhibits, instead of stimulating the neoplastic cells in the zone just beyond the periphery of the tumor mass. Surgical implantation of the tumor cells into healthy tissue is the unavoidable result of excision, and dissemination of metastases by the opening of lymphatics and blood vessels is not prevented. On the other hand the lymphatics and vessels are closed and metastases are not produced. By this method there is no possibility of transplanting or implanting cancer cells into new tissue. There is less likelihood of recurrence following diathermy. The dosage is accurate and, owing to the extreme heat, there is absolute sterilization of the wound and the growth is removed as a necrotic mass.

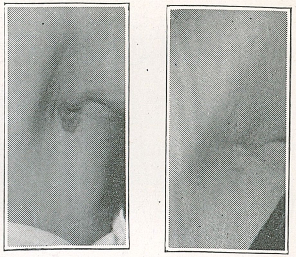
There is less tissue sacrificed than by surgery and there is ordinarily a good cosmetic result. If necessary to remove very large areas it may be necessary to do some plastic operation, especially if on the lower lip. If it were possible to destroy a tumor mass by ordinary cautery there would be some danger of the burn producing a systemic poisoning but there is no absorption from the burned area in coagulation on account of the sealed blood and lymph vessels.

The post-operative condition leads to a quick recovery and during this period the unpleasant odor is one of the disadvantages of this method of treatment. Powdered sugar used on the charred mass aids very materially in reducing the odor and I have found that boiling some water in the room with a small quantity of lysol or similar solution added to the same is a deodorizer. Another disadvantage to surgical diathermy is that there is no chance of saving blood vessels and nerves in close proximity to the disease. It is sometimes necessary to do a ligation before or after the treatment.

Any fissure or crust which lasts longer than a month should lead to the suspicion of malignancy and during this period the general practitioner has a great responsibility. Practically all cancers of the skin can be successfully treated by means of X-rays and electrocoagulation, provided they are treated early and skillfully. Precancerous conditions in the skin, warts, moles, etc., are best treated by coagulation. Early local destruction of all malignancies by surgical diathermy followed by high voltage X-ray therapy of the local lesion and the draining lymphatic areas should cure all such cases. The combined treatment of surgical diathermy and X-ray therapy offers better promise of a permanent cure than either alone. Poor technique with any form of treatment will usually lead to failure and recurrent carinoma gives much less satisfactory results. It has been my practice whenever possible to radiate the area involved both before and after the surgical diathermy treatment and to also give another treatment after complete healing has taken place.



At left,
Epithelioma
of dorsum of hand
before and
after treatment
by surgical
diathermy.
At right,
Epithelioma
in axillary
region
before and after
treatment
by surgical
diathermy.



No tissue should be removed before treatment for diagnosis. It is better to have a lesion of long standing cured than to know the pathology and die from cancer.

Conclusions

1. There is immediate relief of pain. Every case upon awakening will say that he has no pain.
2. Immediate sterilization of the wound as the heat destroys the mixed infection and foul discharges.
3. Much less danger of extension and metastases than by surgery.
4. There is no shock and practically no hemorrhage.

The accompanying illustrations show the appearance of patients both before and after treatment, and are illustrative of some minor conditions which are treated by this method.

(Reprinted from The Journal of Radiology.)

Wide Choice of Modalities Available to Doctors

Away back in the primitive days of medicine, just a few remedies were depended upon for the relief of practically all diseases. Leeches and physic and a small number of simple drugs were the stock in trade of the medical man.

What a difference today! With all the vast fund of medical knowledge and modern drugs at his command, the doctor prescribes exactly those remedies which science has found most efficient for the malady he is treating. In many cases he includes in his prescription one or more special ingredients, to meet special symptoms present in that particular patient. Out of thousands of possible combinations of remedies, he chooses the one which he feels will serve best.

This is universally true today—of medicine. Yet, when we turn to Physiotherapy, what do we find? Not infrequently a condition closely approximating that which formerly existed in medical practice! One machine, perhaps only one modality, out of a field so rich in curative helps!

As a matter of fact, thanks to the enthusiasm and high endeavor of a host of earnest medical men, many distinct modalities are available today to the physiotherapeutist. Where one or two pieces of apparatus were available a few years ago, physicians of today may justifiably aim to install as many as six or eight; each with its own distinct electrotherapeutic uses, and every one a dependable and efficient mechanism, perfected far beyond the dreams of the earlier years of manufacture.

True, the doctor must always be a doctor first of all; combining wisely his physiotherapy and his medicine. Granting this, our point is, that a broad understanding of electrical modalities and comprehensive apparatus for their application is just as essential in truly modern practice as thorough knowledge of medicine.

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A PAGE OF FUN

A certain professor at the University of Chicago, after a trying first-hour class said: "Some time ago my doctor told me to exercise early every morning with dumb-bells. Will the class please join me tomorrow morning before breakfast?"

□ □ □

The father asked Clarence his reason for wanting to marry his daughter Lucille. The young man: "I have no reason, sir: I am in love."

□ □ □

Kitty: "What's a synonym?"
Rhoda: "It's one word that means the same as another."
Kitty: "You're crazy."
Rhoda: "Why?"
Kitty: "It's stuff they put on a bun."

□ □ □

"That makes a difference," said Willie, as he snipped off the left ear of one of the twins.

They don't name girls Prudence and Patience any more!

□ □ □

The policeman, hearing the shot, burst into the fashionable apartment. Cringing before him on the floor was the crumpled figure of a woman, weeping hysterically, a smoking pistol clutched in her trembling fingers.

"My husband! Oh, my husband!" she moaned.

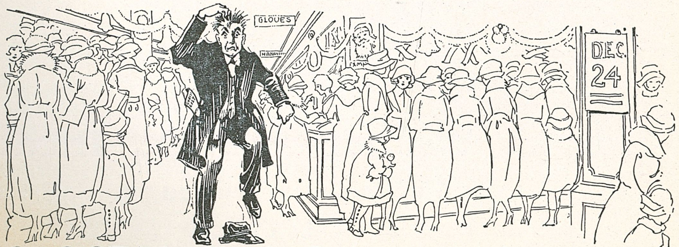
"Control yourself, lady," urged the officer. "Where is the corpse?"

"Gone," sobbed the woman. "He went out through the window. I—I missed him."

□ □ □

Mother: "There were two apples in the cupboard this morning; now there's only one. How do you account for that?"

Freddie: "It was dark in the cupboard, and I didn't notice the other one."



THE LAST MINUTE XMAS SHOPPER

**"DON'T PUT THINGS OFF—
PUT THEM OVER!"**